

REPLACEMENT PARAGRAPHS IN CLEAN FORM
SUBMITTED IN ACCORDANCE WITH 37 CFR 1.121(b)(1)(ii)
IN RESPONSE TO OFFICE ACTION OF JULY 30 2002

IN THE SPECIFICATION

Please amend the paragraph bridging pages 4 and 5 to read as follows:

B¹

Figure 1 is a plan view of the diaper 20 of the present invention in a flat-out, state with portions of the structure being cut-away to more clearly show the construction of the diaper 20. The portion of the diaper 20 which faces the wearer is oriented towards the viewer. As shown in Figure 1, the diaper 20 preferably comprises a liquid pervious topsheet 24; a liquid impervious backsheet 26; an absorbent core 28 which is preferably positioned between at least a portion of the topsheet 24 and the backsheet 26; side panels 30; elasticized leg cuffs 32; an elastic waist feature 34; and a fastening system generally designated 40. The diaper 20 is shown in Figure 1 to have a first waist region 36, a second waist region 38 opposed to the first waist region 36 and a crotch region 37 located between the first waist region 36 and the second waist region 38. The periphery of the diaper 20 is defined by the outer edges of the diaper 20 in which longitudinal edges 50 run generally parallel to the longitudinal centerline 100 of the diaper 20 and end edges 56 run between the longitudinal edges 50 generally parallel to the lateral centerline 110 of the diaper 20.

Please amend the paragraph beginning at line 14 of page 6 to read as follows:

B²

In any case, at least a portion of the backsheet has low breathability, specifically has a water vapor transmission rate, WVTR, of less than about 2600 g/m²/day. The portion of the backsheet with low WVTR may coincide with at least a portion of the absorbent core.

Please amend the last paragraph on page 9 to read as follows:

B³

In certain preferred embodiments, the heat flow is to or from the wearer and the thermal cell actuator 603 while heat flow with the environment outside the diaper may be controlled as shown in Figure 5. If necessary to limit heat flow between the article and the outside environment, additional insulation can be added 604 or 606 between the thermal cell actuator 603 and the outside environment to further control heat transfer. Such insulation can be added either disposed between outer structure 605 and actuator 603 as at 604 or disposed on outer structure 605 as at 606 so as to be further outboard of inner structure 601. Suitable examples of heat insulation layers are typically porous materials with entrained air such as high loft nonwovens, open or closed cell foams, cellulose waddings, and the like.

Please amend the paragraph bridging pages 16 and 17 to read as follows:

B⁴

Further, the thermal cell actuator may be permanently joined to the article or removable therefrom. The thermal cell actuator may be joined or placed in contact with any portion of the article including but not limited to a location adjacent to the topsheet 24 or backsheet 24 or between the topsheet and backsheet. A removable thermal cell actuator may be constructed either by including frangible bonds to facilitate thermal cell actuator removal from the article or by attaching the thermal cell actuator to the article with separable fasteners, including pressure sensitive adhesive fasteners, mechanical fasteners, hook and loop fasteners, interlocking fasteners, or any other suitable fasteners. Alternatively, the article may include a pocket 300 or other structure into which the thermal cell actuator may be placed, one example of which is shown in Figure 3. In such embodiments, it can be used as an Active External Change Aid Device, as disclosed in co-pending U.S. Application Serial Number 09/778,687, entitled Active Change Aids for External Articles, filed in the names of Kline, et al. on February 7, 2001, which is incorporated herein by reference. Removable thermal cell actuators may be constructed in various forms, including small packets in which the user fills a bladder with hot (or cold) water or other fluid, solid, or gel material and attaches it to the article in the region to be heated or cooled.

Please amend the last paragraph on page 17 to read as follows:

B⁵

Force based triggering mechanisms may include, for example, application of a normal force or a tensile force to a structure. The application of the force may cause at least one layer of a structure 220 to rupture or become opened at aperture 222, thus exposing at least two reactants to each other 215 (and said reactants create an endothermic or exothermic effect as they react with each other) as seen in Figure 4. A mechanical activator 502 in the form of an elongated strip, rod, or the like preferably extends from structure 220 to the inner surface of secondary topsheet 43 to a

B5
cont

second retention point. As illustrated and described herein, activator 502 is formed from a substantially inextensible material, or from a material having an extensibility that is significantly lower than the extensibility either of secondary topsheet 43. Activator 502 is connected at one end 504 thereof with secondary topsheet 43 by a suitable second retention point, such as by adhesive layer 506, or by heat or ultrasonic sealing, friction or the like, so that end 504 of activator 502 is firmly and securely held by secondary topsheet 43. The opposite end 508 of activator 502 is connected with structure 220 by a releasable connection arrangement, such as by a pressure-sensitive adhesive layer 510, or the like. Additionally, end 508 of activator 502 has a sufficiently large area to define a cover portion that completely overlies and surrounds aperture 222 provided in structure 220. The application of tension to the garment results in relative movement between the first retention point of structure 220 and other diaper structure 44, defined by adhesive layer or spot 500, and the second retention point of activator 502 and secondary topsheet 43. The activation force may also be provided by a caregiver who peels a tab exposing an opening in the actuator. Example structures which trigger under normal loads are included in previously referenced U.S. Patents 4,462,224; 5,792,213; 5,545,197; 5,423,996; 5,552,075; and 5,650,090, all of which are incorporated herein by reference. Example structures which trigger under tension loads are included in US Patent No. 5,520,274 and pending US Application Serial No.09/481,042 entitled Disposable Garment Having an Expandable Component, filed in the name of Wise, et al. on January 11, 2000. Alternatively, the force application may act to operate a switch which turns on or off an electrically-based thermal cell actuator – the switch could react to normal loads (as a typical pushbutton) or tensile loads (as a typical pull-chain on a light fixture). Properties measured by sensors may include temperature, humidity, concentration of a chemical (such as concentration of urine in the absorbent core or in vapor phase in the environment between the article and wearer), or pH.
